



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/510,011

09/29/2004

Shigeru Sugaya

4474

530 7590 02/19/2009  
LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK  
600 SOUTH AVENUE WEST  
WESTFIELD, NJ 07090

EXAMINER

PHAN, TRI H

ART UNIT

PAPER NUMBER

2416

MAIL DATE

DELIVERY MODE

02/19/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/510,011

**Applicant(s)**

SUGAYA ET AL.

**Examiner**

TRI H. PHAN

**Art Unit**

2416

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 November 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-8,17-26,35-44,53 and 54 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-8,17-26,35-44,53 and 54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment/Arguments*

1. This Office Action is in response to the Response/Amendment filed on November 17<sup>th</sup>, 2008. Claims 2, 9-16, 27-34, 45-52 and 55 are now canceled. Claims 1, 3-8, 17-26, 35-44 and 53-54 are now pending in the application.

### *Claim Objections*

2. Claim 3 is objected to because of the following informalities:

In claim 3, line 2, "claim 2" is a typographical error; it should be correct to -- claim 1 --.

Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 3-8, 17-26, 35-44 and 53-54 are rejected under 35 U.S.C. 102(e) as being anticipated by **Shvodian, William M.** (U.S.7,110,380; hereinafter refer as 'Shvodian').

- In regard to claim 1, **Shvodian** discloses *a wireless communication system that forms a network in an autonomous distributed manner without specific controlling station (for example see figs. 6 and 15; Abstract; col. 7, lines 32-45), which comprises*

*a transmitting-side or receiving-side communication apparatus (for example see figs. 6 and 15), which attempts to perform communication in a predetermined bandwidth ('planning bandwidth allocation'; for example see figs. 1-3; col. 1, lines 61-62; col. 2, lines 40-41), issues a notification indicating a setting of a period during which availability of the predetermined bandwidth is guaranteed in a communication range so that any other communication apparatus that receives the notification does not perform a communication operation in the predetermined bandwidth during the guaranteed period (for example see figs. 15-16; col. 4, lines 37-49; wherein CTS signal, e.g. "notification", is disclosed in col. 7, lines 20-31; col. 8, lines 3-49),*

*wherein, for each predetermined frame period, regardless of whether the wireless communication system is the transmitting-side or the receiving-side communication apparatus, the wireless communication system transmits beacon information that describes information regarding the guaranteed period (for example see figs. 7, 10-14, 16; wherein beacon, e.g. "beacon", is disclosed in col. 4, lines 29-36; col. 6, lines 25-46).*

- Regarding claims 17, 35 and 53, **Shvodian** discloses *system (for example see figs. 6 and 15; where the program software is disclosed in col. 12, line 46 through col. 13, line10), method (for example see figs. 8A-B, 9) and apparatus (for example see figs. 15, 17) for performing the wireless communication operation in an autonomous distributed manner without specific*

*controlling station* (for example see figs. 6 and 15; Abstract; col. 1, lines 23-28; col. 7, lines 32-45), which comprises

*communicating means* for transmitting/receiving a wireless signal within its own communication range (for example see figs. 15, 17; wherein users and coordinators communicate via interfaces, e.g. “communicating means”);

*guaranteed-period setting means* for requesting, within its own communication range, setting of a guaranteed period during which availability of a predetermined bandwidth is guaranteed for said wireless communication apparatus (for example see figs. 15, 17; col. 4, lines 29-49; wherein the controller, e.g. “guaranteed-period setting means”, controls the guaranteed bandwidth allocation based on the RTS from users as disclosed in col. 2, lines 24-32; col. 8, lines 3-27); and

*communication controlling means* for executing a communication in the predetermined bandwidth in response to arrival of its guaranteed period (for example see figs. 15, 17; wherein the processor, e.g. “communication controlling means”, executes the program instructions as disclosed in col. 12, lines 32-45).

*wherein, for each predetermined frame period, regardless of whether the wireless communication apparatus is a transmitting-side or a receiving-side of a reservation communication, the wireless communication apparatus transmits beacon information that describes information regarding the guaranteed period* (for example see figs. 7, 10-14, 16; wherein beacon, e.g. “beacon”, is disclosed in col. 4, lines 29-36; col. 6, lines 25-46).

- In regard to claims 3, 20, 22, 38 and 40, **Shvodian** further discloses, *wherein the receiving-side communication apparatus creates timing utilized for communication in the predetermined bandwidth during the guaranteed period, in a pseudo manner, that has a same state as timing of transmitting a beacon of its own and notifies the timing utilized for the communication in the predetermined bandwidth (for example see col. 6, line 34 through col. 7, line 10).*

- Regarding claims 4, 19, 37 and 39, **Shvodian** further discloses, *wherein, in a period in which no communication apparatus has set a guaranteed period (for example see figs. 11-13), each communication apparatus performs random access based on a collision avoidance operation that starts transmission after detecting no transmission from another communication apparatus ('random access management slot'; for example see figs. 11-12AB; col. 10, lines 2-26).*

- In regard to claims 5, 21, 23 and 41, **Shvodian** further discloses, *wherein the transmitting-side or receiving-side communication apparatus sets a reservation period in its own frame period ('RTS'; for example see col. 7, lines 20-31; col. 8, lines 3-28) and performs the communication in the predetermined bandwidth by utilizing the reservation period ('CTS'; for example see col. 7, lines 20-31; col. 8, lines 3-28).*

- Regarding claims 6, 18, 36 and 54, **Shvodian** further discloses, *wherein each communication apparatus collects beacon information from neighboring communication*

*apparatuses, obtains information regarding a period that is guaranteed to one or more of the neighboring communication apparatus (for example see fig. 7; col. 6, lines 34-46), and does not set, as its own guaranteed period, the period that is guaranteed to the one or more of the neighboring communication apparatuses (for example see col. 7, lines 20-31; col. 8, lines 3-28, 50-67); and where the static information is stored in the main memory, e.g. "means for storing", as disclosed in col. 11, lines 48-67.*

- In regard to claims 7, 24 and 42-43, **Shvodian** further discloses, *wherein the transmitting-side or receiving-side communication apparatus collects beacon information from neighboring communication apparatuses (for example see figs. 15-16; where piconets 1 and 2 are neighboring with each other), obtains information regarding a period that is guaranteed to one or more of the neighboring communication apparatus (for example see fig. 7; col. 6, lines 34-46), and sets, as its own guaranteed period, a period that is not guaranteed to any of the neighboring communication apparatuses (for example see col. 7, lines 20-31; col. 8, lines 3-28, 50-67).*

- Regarding claims 8, 25-26 and 44, **Shvodian** further discloses, *wherein the transmitting-side or receiving-side communication apparatus obtains information regarding a period that is guaranteed to a communication apparatus at another end of a communication (for example see fig. 7; col. 6, lines 34-46) and sets, as its own guaranteed period, a period that is not guaranteed to any neighbors of the communication apparatus (for example see col. 7, lines 20-31; col. 8, lines 3-28, 50-67).*

***Response to Arguments***

5. The 35 U.S.C. 112, second paragraph rejection to claims 53-54 has been withdrawn in light of applicant's amendment filed on 10 June 2004.

Applicant's arguments filed on November 17<sup>th</sup>, 2008 with respect to claims 1, 3-8, 17-26, 35-44 and 53-54 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan, whose telephone number is (571) 272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi H. Pham can be reached on (571) 272-3179.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR



Art Unit: 2416

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tri H. Phan/

Primary Examiner, Art Unit 2416

February 19, 2009